

Please amend the claims as follows:

SUB
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2. (Amended) A composition comprising a biomaterial architecture having a ligand attached thereto through a biological recognition event, wherein said biomaterial architecture comprises a polymer having an anchor moiety incorporated therein or attached thereto, and wherein said biological recognition event is further characterized in that it involves an anchor-adapter-tag unit, [whereby said anchor is attached to the biomaterial architecture, and] whereby the [said] tag is attached to the ligand, and wherein said adapter is capable of binding to both the anchor and the tag to effect the biological recognition event.

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B2

6. (Amended) The composition of claim 2, wherein the anchor [and tag independently comprise any] comprises a biologically relevant molecule capable of being incorporated into the polymer from which the biomaterial architecture is formulated, [and] the tag comprises a biologically relevant molecule capable of attachment to the desired ligand, and wherein the adapter comprises [any] a biologically relevant molecule capable of binding to both the anchor and tag moieties to generate a biomolecular interaction.

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11. (Amended) The composition of claim 2, wherein the anchor and tag each comprise biotin and the adapter comprises avidin or streptavidin.

A4

13. (Amended) The composition of claim 2 or 66, wherein said ligand [comprises a biologically relevant compound] is selected from the group consisting of peptide, protein, carbohydrate, nucleic acid, lipid, polysaccharide, inorganic molecule, organic molecule, and combinations thereof.

A5

18. (Amended) A method for synthesizing a biomaterial architecture having an anchor associated therewith comprising:

providing a solution of a biodegradable polymeric material, wherein said polymeric material is capable of having an anchor moiety associated therewith and wherein said polymeric material has at least one functionality capable of further polymerization;

contacting said solution with an anchor moiety capable of associating with said polymeric material; and

subjecting said polymeric material having an anchor associated therewith to conditions capable of effecting further polymerization at a desired functionality to yield a desired polymeric material;

whereby said polymeric material is utilized directly as a biomaterial architecture, or the method optionally further comprises a step of formulating said polymeric material into a desired biomaterial architecture.

25. (Amended) The method of claim 23, wherein the anchor [and tag independently comprise any] comprises a biologically relevant molecule capable of being incorporated into the polymer from which the biomaterial architecture is formulated, [and] the tag comprises a biologically relevant molecule capable of attachment to the desired ligand, and wherein the adapter comprises [any] a biologically relevant molecule capable of binding to both the anchor and tag moieties to generate a biomolecular interaction.

32. (Amended) The method of claim 24 or 68, wherein said ligand comprises a biologically relevant compound selected from the group consisting of peptide, protein, carbohydrate, nucleic acid, lipid, polysaccharide, inorganic molecule, organic molecule, and combinations thereof.

34. (Amended) The method of claim 33, wherein the anchor [and tag independently comprise any] comprises a biologically relevant molecule capable of being incorporated into the polymer from which the biomaterial architecture is formulated, [and] the tag comprises a biologically relevant molecule capable of attachment to the desired ligand, and wherein said anchor and tag are capable of interacting to effect [and effecting] a biomolecular interaction between the anchor and tag.

43. (Amended) The method of claim 33 or 72, wherein said ligand comprises a biologically relevant compound selected from the group consisting of peptide, protein, carbohydrate, nucleic acid, lipid, polysaccharide, inorganic molecule, organic molecule, and combinations thereof.

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45. (Amended) The method of claim 44, wherein said biomolecular interaction is characterized in that it involves an anchor-adapter-tag unit, whereby said anchor is incorporated into or attached to the biomaterial architecture and said tag is attached to the ligand, and said adapter is capable of binding to both the anchor and the tag.

46. (Amended) The method of claim 44, wherein the anchor [and tag independently comprise any] comprises a biologically relevant molecule capable of being incorporated into the polymer from which the biomaterial architecture is formulated, [and] the tag comprises a biologically relevant molecule capable of attachment to the desired ligand, and wherein the adapter comprises [any] a biologically relevant molecule capable of binding to both the anchor and tag moieties to generate a biomolecular interaction.

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48. (Amended) The method of claim 44, wherein the anchor [and tag independently comprise any] comprises a biologically relevant molecule capable of being incorporated into the polymer from which the biomaterial architecture is formulated, [and] the tag comprises a biologically relevant molecule capable of attachment to the desired ligand, and wherein said anchor and tag are capable of interacting to effect [and effecting] a biomolecular interaction between the anchor and tag.

Please cancel claims 55-63.

Please add the following new claims:

A12
--64. (Newly added) The composition of claim 5, wherein the anchor comprises a biologically relevant molecule capable of being incorporated into the polymer from which the biomaterial architecture is formulated, the tag comprises a biologically relevant molecule capable of attachment to the desired ligand, and wherein said anchor and tag are capable of interacting to effect a biomolecular interaction between the anchor and tag.--

--65. (Newly added) The composition of claim 2, further comprising a therapeutic agent, wherein said therapeutic agent is formulated with the polymer to generate a biomaterial architecture having a therapeutic agent encapsulated therein.--

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--66. (Newly added) The composition of claim 2, further comprising a therapeutic agent, wherein said therapeutic agent is a ligand attached to the biomaterial architecture through a biological recognition event.--

A12
CONT.
--67. (Newly added) The composition of claim 2, wherein said biomaterial architecture comprises a particle.--

--68. (Newly added) The composition of claim 2, wherein said biomaterial architecture comprises a nanosphere or microsphere.--

--69. (Newly added) The method of claim 24, wherein the step of providing a biomaterial architecture comprises providing a biomaterial having a therapeutic agent encapsulated therein.--

--70. (Newly added) The method of claim 24, wherein the step of contacting said biomaterial-anchor-adapter moiety with a desired ligand comprises contacting said moiety with a therapeutic agent having a tag incorporated therein.--

--71. (Newly added) The method of claim 33, wherein the step of providing a biomaterial architecture comprises providing a biomaterial having a therapeutic agent encapsulated therein.--

--72. (Newly added) The method of claim 33, wherein the step of contacting said biomaterial-anchor-adapter moiety with a desired ligand comprises contacting said moiety with a therapeutic agent having a tag incorporated therein.--